

Monday, 24 June 2024

<p>9:45 AM - 6:00 PM</p> <p>Technical Tour: High Tech Campus, Eindhoven</p>	<p>9:45 AM - 5:30 PM</p> <p>Technical Tour: TNO SolarLab, Petten</p>
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Tuesday, 25 June 2024

8:30 AM - 9:00 AM

C1.04

Opening Session

Tuesday, 25 June 2024

9:00 AM - 10:50 AM

C1.04

Innovative materials and fundamental research for bottom and top devices

9:00 AM - 9:18 AM

Interface and bulk engineering for efficient perovskite-based tandem solar cells

Bin Chen

9:18 AM - 9:36 AM

Sublimed perovskites and integration to 2T perovskite-Si tandem cells

Federico Ventosinos

9:36 AM - 9:54 AM

Exploring Physical Vapor Deposition of Metal Halide Perovskites for Tandem PV

Monica Morales

9:54 AM - 10:12 AM

Investigating the fabrication of Perovskite based solar cells by ultrasonic spray coating: a design of experiments approach

Wim Deferme

10:12 AM - 10:30 AM

Wide-Bandgap Two-Step Processed Perovskite Top Cells for Perovskite-Based Tandem Photovoltaics

Ronja Pappenberger

10:30 AM - 10:48 AM

Perovskite Deposition by Spray Coating and Gas Quenching for Industrially Viable Tandem Solar Cell Fabrication

Calum McDonald

10:50 AM - 11:15 AM

De Brug

Coffee Break

Tuesday, 25 June 2024

11:15 AM - 12:30 PM

C1.04

All-thin film and alternative materials for tandem devices

11:15 AM - 11:33 AM

Advanced tandem module concepts such as CISG/Si as well as voltage-matched tandem modules

Jessica de Wild

11:33 AM - 11:51 AM

Unlocking the Potential of Perovskite Solar Cells: from Single-Junction to Tandem

Yi Hou

11:51 AM - 12:09 PM

Development of efficient wide-bandgap perovskites and sub-cell characterization for all-perovskite tandem solar cells

Junke Wang

12:09 PM - 12:27 PM

Reduction of optical and electrical losses in all-perovskite tandem solar cells

Philipp Tockhorn

12:30 PM - 1:30 PM

De Brug

Lunch Break

Tuesday, 25 June 2024

1:30 PM - 3:00 PM

De Brug

Poster Session 1: Innovative materials & fundamental research, characterization, and reliability

LED stability setups for perovskite single-junction and tandem solar cells

Marko Jost

Hybrid Perovskite Thin Film Deposition for Perovskite-based Tandem Photovoltaics

Julian Petry

Perovskite deposition by hybrid evaporation-solution process for tandem solar cell application

Abduheber Mirzehmet

Decrease of internal to external open circuit voltage deficit by piperazinium iodide beneath C60 in perovskite solar cells

Felix Haase

Interplay of Subcell Hysteresis at Fast IV-Scans on Monolithic Perovskite-Silicon Tandem Solar cells

Jonas Horn

Materials and device architectures for monolithic perovskite/silicon-heterojunction tandem solar cells

Maria Federica Caso

Fast Spectral Adjustment for Tandem Cells with LED Based Solar Simulators Based on EQEs

Lukas Ziegler

Implementation and optimisation of ethoxylated polyethyleneimine as electron transport layer in semi-transparent perovskite solar cells without using a protective buffer layer

Tina Wahl

Dielectric Layers in Perovskite-Silicon Tandem Solar Cells: A Simulation Study

Philipp Wagner

Optimum Bandgap Combination for Voltage-Matched Three-Terminal Tandem Solar Cells

Philipp Wagner

Perovskite and silicon - also a good match without inter-poisoning?

Roland Clausing

Evolution of the Morphology of Cs_{0.05}PbI_{2.05} Thin Films During Annealing for FAI-Based Perovskites

Tom Burgard

Light and humidity induced degradation: Perovskite solar cells enhanced stability with 2D passivating interfaces

Dounya Barrit

Crystallization control enabling slot die coated Sn-Pb films for all-perovskite tandem applications

Xuan Li

Automated Fabrication and Characterization of Inorganic Halide Perovskite Absorbers

Hilal Aybike Can

High efficiency vacuum assisted Tin-lead narrow bandgap perovskite solar cells and their integration into 2T all-perovskite tandem devices

Ting Pan

Impact of the Transparent Conductive Oxide Microstructure on the Electronic Properties of Carbazole-based Self-Assembled Monolayers

Suzana Kralj

Pulsed Laser Deposition of Wide Band Gap Perovskites for Monolithic Perovskite/Silicon Tandem Devices

Suzana Kralj

Photoluminescence quenching from C60-oxygen interaction and its utility for SnO_x coverage assessment

Lea Zimmermann

Machine-learning-based in situ metrology for monitoring and predicting scalable perovskite thin-film formation

Felix Laufer

Co-evaporation of Methylammonium Chloride in mixed halide perovskite for efficient wide bandgap solar cells

Manuel Piot

Pulsed Laser Deposition of Metal Halide Perovskites: In-situ Monitoring at Accelerated Deposition Rates and Device Performance

Tatiana Soto Montero

Can shunt-quenching really reduce top cell shunt losses in perovskite silicon tandem cells?

Martin Bivour

Optical Modelling of Flexible Thin-Film Tandem Solar Cells: Enhancing Efficiency with Amorphous Silicon and Tin-Lead Perovskite Absorber Layers

Rudi Santbergen

Composition Analysis: How to Optimize Co-Evaporated Perovskite-Absorbers for Monolithic Silicon Tandem Solar Cells?

Marcel Roß

Flexible, high-efficiency (Ag,Cu)InSe₂ bottom cells with 1.00 eV band gap for all thin-film tandem solar cell

Maximilian Krause

Enhancing efficiency and stability of perovskite/silicon tandem solar cells: A focus on polymer encapsulants

Quiterie Emery

Simple templating agent improves uniformity and increases efficiency of co-evaporated wide band gap perovskite solar cells

Viktor Škorjanc

Identifying shunts paths of fully evaporated textured perovskite/silicon tandem solar cells by means of EQE and Voc - Suns with selective illumination techniques.

Federico Ventosinos

Opto-electronic Sub-Cell Analysis of Perovskite based Tandem PV

Andres-Felipe Castro-Mendez

Tandem Solar Cells and the Pathway to Commercialisation via V-CVD

Angela Chen

Energy Yield and Reverse Bias Interplay. The case of Silicon Perovskite Tandem Solar Cells

Diego Di Girolamo

Investigation of Sublimable New ETMs for Vacuum Deposition in Perovskite Tandem Solar Cells

Max Bernardes de Araujo

Universal Formation Mechanism of Halide Perovskite Thin Films

Martin Ledinsky

Initial Findings in the Study of Donor-Acceptor Type Molecules as Electron-Selective Monolayers

Artiom Magomedov

3:00 PM - 3:30 PM

De Brug

Coffee Break

Tuesday, 25 June 2024

3:30 PM - 5:20 PM

C1.04

Silicon perovskite tandem

3:30 PM - 3:48 PM

Development of 32.33% perovskite/c-Si solar cells using industrial fabricated TOPCon device

Menglei Xu

3:48 PM - 4:06 PM

Recent Progress in Pushing up the Record Efficiency of Silicon/Perovskite Tandem Solar Cells

Bo He

4:06 PM - 4:24 PM

Enhanced cation interaction in perovskites leads 33.7%-efficient perovskite/silicon tandem solar cells

Esma Ugur

4:24 PM - 4:42 PM

On the route to highly efficient perovskite-based triple-junction solar cells: Optimized fabrication and precise characterization

Maryam Heydarian

4:42 PM - 5:00 PM

Fully-Textured Perovskite/Silicon Tandem Solar Cells via Hybrid Route Processing: Efficiency Potential and Process Optimization

Patricia S. C. Schulze

5:00 PM - 5:18 PM

Surface and interface passivation for highly efficient perovskite solar cells and perovskite/c-Si tandems

Kerem Artuk

5:20 PM - 5:50 PM

C1.04

Stability consensus paper & stability contest

6:00 PM - 8:00 PM

De Brug

Live broadcast of the UEFA EURO 2024 football match: the Netherlands vs. Austria

Wednesday, 26 June 2024

8:30 AM - 10:00 AM

C1.04

Deposition techniques towards large area tandem devices

8:30 AM - 8:48 AM

Vapor Phase Deposition of Perovskite Photovoltaics

Ulrich Paetzold

8:48 AM - 9:06 AM

Approaches for industry compatible processes in perovskite/silicon tandem solar cells

Angelika Harter

9:06 AM - 9:24 AM

Upscaling of Tandem device on various substrates

Valerio Zardetto

9:24 AM - 9:42 AM

Enhancing Photovoltaic Performance: Blade-Coated Perovskite/Silicon Tandems via Double-Side 2D/3D Perovskite Heterostructures

Anand Selvin Subbiah

9:42 AM - 10:00 AM

Deposition of perovskite solar cells via a scalable two-step evaporation/inkjet printing method

Florent Sahli

10:00 AM - 10:30 AM

De Brug

Coffee Break

Wednesday, 26 June 2024

10:30 AM - 12:00 PM

C1.04

Monolithic tandem: Upscaling, industrialization and pilot line

10:30 AM - 10:48 AM

Silicon PV perspective on tandem R&D

Fabian Fertig

10:48 AM - 11:06 AM

Perovskite tandem PV at a Swift Solar

Tomas Leijtens

11:06 AM - 11:24 AM

Industrialisation of tandem cells and modules

Daniel Kirk

11:24 AM - 11:42 AM

Precise measurement of full-sized perovskite-silicon tandem modules

David Chojniak

12:00 PM - 1:00 PM

De Brug

Lunch Break

Wednesday, 26 June 2024

1:00 PM - 2:30 PM

De Brug

Poster Session 2: Tandem solar devices from research to industrialization

Development of a lamination process for tandem solar cells

Amandine BOULANGER

Levitrack spatial ALD of SnO₂ buffer layers for perovskite tandem solar cell production

Mark Steltenpool

Industrial Relevant and Scalable Fabrication of Formamidinium based Perovskite Solar Devices by Slot-Die Coating Process

Muhammed Salim Kunnummal Mangott

Bottom Subcell Investigation for High Efficiency 2T Perovskite/u-CIGS Tandem Solar Cell

Nour El I Boukortt

Ultrasonic Spray Coating for the scalable fabrication of Perovskite-on-Chalcogenide Monolithic Tandem Devices: Approaching the 20% Efficiency

Gizem Birant

Homogeneous crystallization and buried interface passivation for all-perovskite tandem solar modules

Han Gao

Tin Oxide Sputter Deposition for Efficient Perovskite Tandem Solar Cells: Towards Industrial-scale Manufacturing

Marlene Härtel

Optimisation of MA-free lead-tin perovskite absorber and interfaces in all perovskite tandem solar cells

Jules Allegre

Scalable Room Temperature Pulsed Laser Deposition of Metal Oxide Charge Transport Layers in P-I-N Perovskite Solar Cells towards Tandem with Silicon

Kilian Alcocer

Analysis of opportunities to cost-optimize Czochralski ingot production for tandem PV

Hande Ciftpinar

Evaluation of Screen-Printed and Dispensed Ultra-Low-Temperature Metallization for Perovskite-Silicon Tandem Solar Cells

Roman Keding

Thermally Evaporated Hole Transporting Layers for High Efficiency Fully Textured Tandem Solar Cells

Bhushan Kore

Stabilizing Transient Wettability of Perovskite Ink on PEDOT:PSS for Scalable Narrow Bandgap Perovskite Modules by Blade Coating

Severin Siegrist

High-Rate Spatial Atomic Layer Deposition of AZO in perovskite/silicon tandem solar cells

Floor Souren

Water-free PEDOT:PSS formulation for Pb-Sn mixed perovskite single-junction and all-perovskite tandem solar cells

Georgios Loukeris

A New Method for Rate Optimization for Efficient Co-evaporated Wide Bandgap Perovskites in Point-source Evaporator

Arman Mahboubi Soufiani

Towards Industry-Compatible High-Efficiency PVSK/Si Tandem Solar Cells

Sofia Chozas Barrientos

Impact of ion migration on the performance and stability of perovskite-based tandem solar cells

Sahil Shah

All Perovskite Tandem Solar Cells for Low-Intensity Low-Temperature Environments

Sercan Ozen

Two-step hybrid deposition via thermal evaporation and slot-die coating of halide perovskites for industrially compatible perovskite/silicon tandems

Michele De Bastiani

Minimizing power losses by systematic optimization of the interconnection geometry in laser-patterned perovskite-CIGSe tandem mini-modules

Nicolas Otto

Techniques for low-cost upscaling of bifacial 4 terminal perovskite-silicon tandem

Elisa Nonni

Alternative NiOx Interlayers for 2T Perovskite Silicon Tandem Solar Cells

Julci Ditsougou

Scalable Solution-Processed Hole Transport Layer for Efficient Inverted Semi-Transparent Perovskite Solar Cells and 4T tandem integration

Yassine Raoui

Two-Step Hybrid Perovskite Deposition: Organic Cations Interdiffusion through Spin-coating and Blade-coating for Tandem Applications

Erica Magliano

Roadmap for Tandem Photovoltaics

Kaitlyn VanSant

Photovoltaic modules with 2T perovskite-silicon tandem cells with up to 25.5 % active area module efficiency: Lamination process optimization and CTM analysis

Lukas Brockmann

High Bandgap Perovskite Absorber for the Application in Perovskite/Perovskite/Silicon Triple-Junction Solar Cells

Minasadat Heydarian

Curved perovskite films and cells on micron-sized Si pyramids by solution processing

Deniz Turkey

Reducing voltage loss in wide-band gap perovskite solar cells with fluorinated aromatic ammonium halides for tandem solar cells application.

Huyen Tran

Development of Nanocrystalline Silicon Recombination Junctions for High-Performance Silicon-Perovskite Tandem Solar Cells

Chandralina Patra

Perovskite/Silicon Triple Junction Devices: An overview of the progress and results from the TRIUMPH project funded under Horizon Europe

Hariharsudan Sivaramakrishnan Radhakrishnan

Rational design of industrial 3-terminal tandem modules

Daniel Tune

All-perovskite tandem photovoltaics for indoor applications

Jarla Thiesbrummel

Atomic-layer-deposition-free Monolithic Perovskite/Silicon Tandem Solar Cell Reaching 29.91 % Power Conversion on Industrial Silicon Bottom Cells

Bor Li

Fully Textured Monolithic Perovskite/Silicon Tandem Solar Cells by Thermal Co-Evaporation: Substrate Influence on the Growth of Wide Band Gap Perovskite Absorber

Stefanie Severin

2:30 PM - 3:00 PM

De Brug

Coffee Break

Wednesday, 26 June 2024

3:30 PM - 4:15 PM

C1.04

Module based tandem: Upscaling, industrialization and pilot line

3:30 PM - 3:48 PM

Recent progress of perovskite solar modules and its tandem application

Ryota Mishima

3:48 PM - 4:06 PM

Towards 4T bifacial tandem modules

Francesco Di Giacomo

4:15 PM - 4:45 PM

De Brug

Coffee Break

Wednesday, 26 June 2024

4:45 PM - 6:00 PM

C1.04

Sustainability, life cycle and circular economy

4:45 PM - 5:03 PM

Will Resource Supply Restrict the Ramp-up of Perovskite-Tandem PV?

Jan Christoph Goldschmidt

5:03 PM - 5:21 PM

Evaluating and Mitigating Risks of Perovskite-Derived Pb

Markus Lenz

5:21 PM - 5:39 PM

Sustainability of new technologies (LCA assessment & recyclability)

Nouha Gazbour

5:39 PM - 5:57 PM

Techno-economic and environmental assessment of perovskite on Si tandem modules

Lars Oberbeck

7:00 PM - 10:00 PM

Café de Jaren

Workshop Dinner

Thursday, 27 June 2024

8:30 AM - 10:00 AM

C1.04

Reliability, stability, accelerated testing

8:30 AM - 8:48 AM

Perovskite/perovskite tandems and their stability

Dewei Zhao

8:48 AM - 9:06 AM

Encapsulation and indoor/outdoor stability

Noëlla Lemaitre

9:06 AM - 9:24 AM

Long-term stable Perovskite/Perovskite tandemcells and modules

Han Gao

9:24 AM - 9:42 AM

Predicting the stability of perovskite solar cells based on their ionic properties

Martin Stolterfoht

10:00 AM - 10:30 AM

De Brug

Coffee Break

Thursday, 27 June 2024

10:30 AM - 12:00 PM

C1.04

Outdoor testing, energy yield and bankability

10:30 AM - 10:48 AM

Light cycling as a key to understanding the outdoor behaviour of perovskite solar cells

Mark Khenkin

10:48 AM - 11:06 AM

Mainstream models cannot predict perovskite field performance

Timothy Silverman

11:06 AM - 11:24 AM

Real-Life Perovskite/c-Si Tandem Challenges

Andrei Los

11:24 AM - 11:42 AM

3-Terminal Perovskite-Silicon Tandems: Understanding the Outdoor Degradation of Large-Area Tandems

Miha Kikelj

11:42 AM - 12:00 PM

Optimizing the bandgap energy of 2-, 3-, and 4-terminal perovskite/silicon tandem modules under realistic operating conditions

Youri Blom

12:00 PM - 1:00 PM

De Brug

Lunch Break

1:00 PM - 2:30 PM

C1.04

Panel Discussion: Addressing Critical Knowledge Gaps for Industrialization of Perovskite-based Tandem Devices

2:30 PM - 3:00 PM

Coffee Break

Thursday, 27 June 2024

3:00 PM - 4:30 PM

C1.04

Characterization, analysis and modelling; new protocols and procedures

3:00 PM - 3:18 PM

Photo- and Electroluminescence Characterization of Perovskite Single Junction and Tandem Solar Cells

Yueming Wang

3:18 PM - 3:36 PM

Impact of mobile ions: characterisation & modelling

Daniel Jacobs

3:36 PM - 3:54 PM

Modelling reverse-bias breakdown in all-perovskite tandem modules under partial shading conditions

Urs Aeberhard

3:54 PM - 4:12 PM

Optimizing test methods for Tandem PV power stability: scaling up to modules

Stefan Roest

4:12 PM - 4:30 PM

About the peculiarities of IV Analysis of Perovskite on Silicon Triple-Junction Solar Cells

Martin C. Schubert

4:30 PM - 5:00 PM

C1.04

Closing Session